

# ***Iowa Child Care and School Audit Report 2017-18***

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## Background

Annually, the Iowa Department of Public Health Immunization Program releases school and child care audit reports. Local Public Health Agencies (LPHAs) conduct audits of immunization records for students enrolled in licensed child care centers and public, private and parochial students in kindergarten through 12th grade each year. Assessments are conducted to ensure attendees receive the required immunizations and have a valid Iowa Department of Public Health Certificate of Immunization, Certificate of Immunization Exemption, or Provisional Certificate of Immunization. Data files contained in this report are available on the Immunization Program webpage at <http://idph.iowa.gov/immtb/immunization/audits>.

Iowa Code, Chapter 139a.8(6) and Iowa Administrative Code, 641-7.7(139) outline immunization requirements for students attending licensed child care centers and elementary or secondary schools. To attend school or licensed child care, the child needs to present a valid Certificate of Immunization, Provisional Certificate of Immunization, or Certificate of Immunization Exemption (Medical or Religious) to the admitting official. A brief explanation of each certificate is included below.

- **Certificate of Immunization** - Issued when applicant has a record of age-appropriate immunizations that meet the requirement for licensed child care or school enrollment.
- **Provisional Certificate of Immunization** - Issued when the applicant has received at least one dose of each of the required vaccines but has not completed all required immunizations or is a transfer student from another U.S. school system.
- **Certificate of Immunization Exemption-Medical** - Iowa law allows for medical exemption to immunization when required immunizations would be injurious to the health and well-being of the applicant or any member of the applicant's family or household or required vaccine would violate minimum interval spacing.
- **Certificate of Immunization Exemption-Religious** - Iowa law allows for religious exemption to immunization when immunizations conflict with a genuine and sincere religious belief, and is not based merely on philosophical, scientific, moral, personal or medical opposition to immunizations.

**Data note:** Child Care data were updated on August 20, 2018, resulting in changes from the previously released 2017-18 School and Childcare Audit report. Changes are highlighted.

## Vaccination Coverage for Child Care

Local Public Health Agencies conducted audits of immunization records for children enrolled in Iowa's licensed child care centers during the 2017-2018 school year. Statewide vaccination coverage levels were calculated, various factors assessed, and in total, 96,182 records of enrolled children were analyzed.

- During the 2017-18 school year, **96.19%** of children attending license child care centers had a valid immunization certificate and were compliant with immunization requirements.
- The statewide coverage levels for all vaccinations required at child care entry was **93.28%** (89,694 records), as indicated by valid Certificates of Immunizations (Appendix 1).
- Invalid or no immunization certificates accounted for **3.81%** (3,662 records) of children enrolled in child care (Figure 1 and Table 1).

**Figure 1. Immunization certificates by type, Child Care, Iowa, 2011-12 to 2017-18**

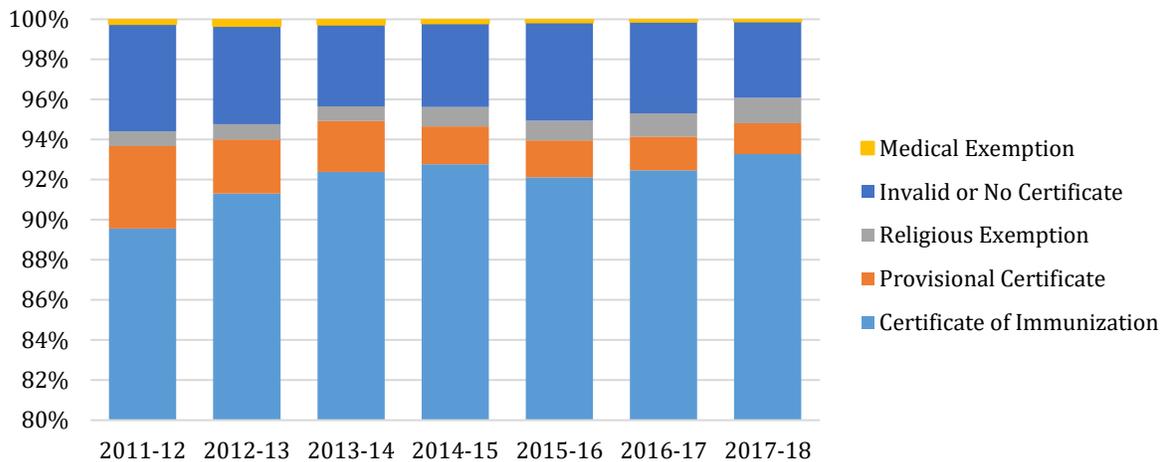


Figure Note: Vertical axis begins at 80%

**Table 1. State Immunization Summary by Year, Child Care, Iowa, 2011-12 to 2017-18**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	Percent	Total	Percent	Medical		Religious		Total	Percent	Total	Total	Percent
2011-12	68,830	89.56	3,158	4.11	285	0.37	571	0.74	4,118	5.36	76,854	72,844	94.78
2012-13	75,983	91.31	2,235	2.69	269	0.32	636	0.76	4,089	4.91	83,212	79,123	95.09
2013-14	74,659	92.39	2,048	2.53	219	0.27	599	0.74	3,286	4.07	80,811	77,525	95.93
2014-15	79,415	92.76	1,631	1.90	169	0.20	826	0.96	3,576	4.18	85,617	82,041	95.82
2015-16	78,272	92.12	1,551	1.83	140	0.16	845	0.99	4,163	4.90	84,971	80,808	95.10
2016-17	86,048	92.47	1,561	1.68	112	0.12	1,067	1.15	4,266	4.58	93,054	88,788	95.42
2017-18	<b>89,720</b>	<b>93.28</b>	1,476	1.53	93	0.10	1,231	1.28	<b>3,662</b>	<b>3.81</b>	96,182	<b>92,520</b>	<b>96.19</b>

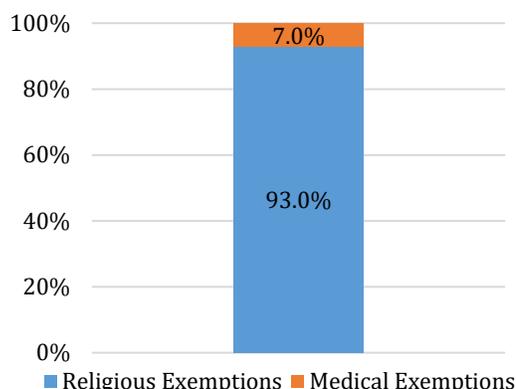
### Provisional Certificate of Immunization

- The percent of children in child care with a Provisional Certificate of Immunization has declined since the 2011-12 school year.
- Provisional Certificates decreased from 4.11% (3,158 children) during the 2011-12 school year to 1.53% (1,476 children) during the 2017-18 school year (Table 2 and Figure 1).
- For the 2017-18 school year, the number of Provisional Certificates decreased 27.96% since the 2013-14 school year and by 5.45% from the previous year.

## Exemptions

- During the 2017-2018 school year, 1,324 children in child care had a Certificate of Immunization Exemption. Of the 1,324 records, 93.0% (1,231 records) were categorized as religious and 7.0% (93 records) were categorized as medical (Figure 2).
- The number of medical exemptions declined every year between 2011 and 2018 (Table 1).
- The number of Certificates of Medical Exemption decreased by 57.5% (126 records) since the 2013-14 school year and by 16.9% (19 records) from the previous year.
- A steady increase was reported in the number of children with religious exemptions over the past seven years.
- In 2018, 1,231 children enrolled in licensed child care across Iowa have a Religious Certificate of Immunization. This number represents less than 1.30% of all enrolled children analyzed.
- The number of Certificates of Religious Exemption has increased by 105.5% (632 records) since 2013-14, and increased 15.4% (164 records) from the previous year (Table 1).

**Figure 2. Percentage of Exemptions by Type, Child Care, Iowa, 2017-2018**



## Under and Un-Immunized

The number of under and un-immunized children has remained consistent since 2013-14 and includes children who have an invalid or no certificate, Provisional Certificate of Immunization, Certificate of Medical Exemption or Certificate of Religious Exemption (Table 2 and Appendix 2).

**Table 2. Under-Immunized Children in Child Care, Iowa, 2013-14 to 2017-18**

	2013-14	2014-15	2015-16	2016-17	2017-18
Certificate of Medical Exemption	219	169	140	112	93
Certificate of Religious Exemption	599	826	845	1,067	1,231
Provisional Certificate	2,048	1,631	1,551	1,561	1,476
Invalid or No Certificate	3,286	3,576	4,163	4,266	3,662
Total Under/Un-immunized	6,152	6,202	6,699	7,006	6,462
Percent of Under/Un-immunized Students	7.61%	7.24%	7.88%	7.53%	6.72%
Percent Change in Number of Under/ Un-immunized from previous year		0.8%	8.0%	4.6%	-7.8%

## Vaccination Coverage for Public, Private and Parochial Schools

Local Public Health Agencies conducted audits of immunization records for children enrolled in kindergarten at Iowa public, private and parochial schools during the 2017-2018 school year. Statewide vaccination coverage levels were calculated, various factors assessed, and in total, 39,624 records of enrolled students were analyzed.

## Vaccination Coverage of Students Kindergarten through 12<sup>th</sup> Grade

- During the 2017-18 school year, there were 1,597 schools and 521,029 enrolled students analyzed.
- During the 2017-18 school year, 98.82% of Iowa students in kindergarten through 12<sup>th</sup> grade had valid immunization certificates and were compliant with immunization requirements (Appendix 3).
- The statewide coverage levels for all vaccinations required at school entry was 95.55% (497,864 records), as indicated by valid Certificates of Immunizations.
- Invalid or no immunization certificates accounted for 1.18% (6,134 records) of children enrolled in Kindergarten through 12<sup>th</sup> grade (Figure 3 and Table 3).

**Figure 3.** Immunization certificates by type Kindergarten -12<sup>th</sup> Grade, Iowa, 2006-07 to 2017-18

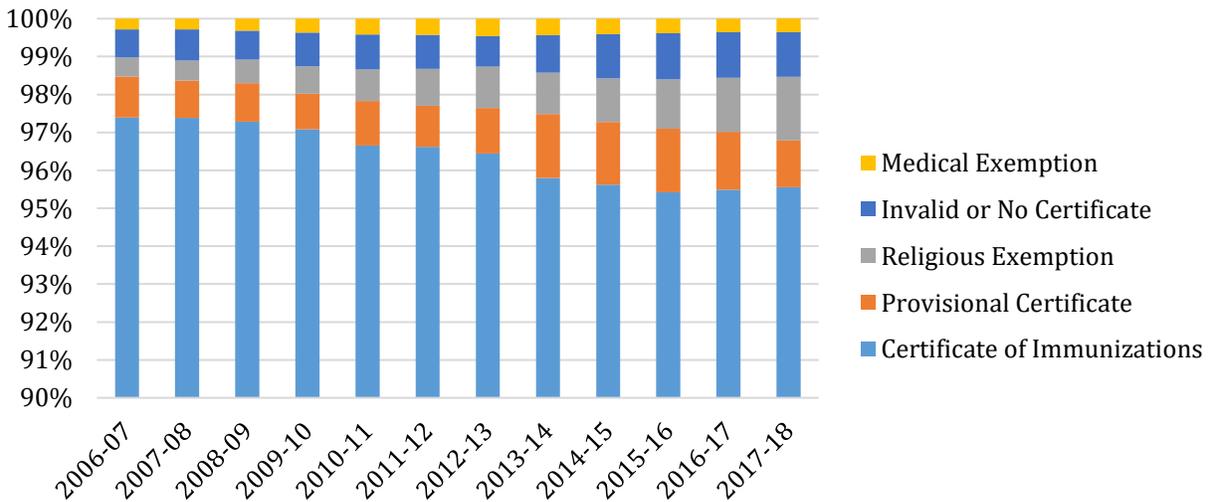


Figure Note: Vertical axis begins at 90%

**Table 3. State Immunization Summary by Year, Kindergarten - 12<sup>th</sup> Grade, Iowa, 2006-07 - 2017-18**

Audit Year	Certificate of Immunization	Percent Certificate of Immunization	Provisional Certificate of Immunization	Percent Provisional Certificate of Immunization	Exemptions				Invalid / No Certificate	Percent Invalid / No Certificate	Total Valid Certificates	Total Enrolled	Percent with Valid Certificates
					Medical	Percent Medical	Religious	Percent Religious					
2006-07	496,646	97.39	5,543	1.09	1,461	0.29	2,572	0.50	3,733	0.73	506,222	509,955	99.27
2007-08	498,918	97.38	5,045	0.98	1,443	0.28	2,706	0.53	4,226	0.82	508,112	512,338	99.18
2008-09	489,493	97.28	5,109	1.02	1,604	0.32	3,133	0.62	3,817	0.76	499,339	503,156	99.24
2009-10	490,783	97.08	4,740	0.94	1,852	0.37	3,662	0.72	4,499	0.89	501,037	505,536	99.11
2010-11	489,069	96.65	5,959	1.18	2,113	0.42	4,206	0.83	4,655	0.92	501,347	506,002	99.08
2011-12	492,952	96.62	5,512	1.08	2,184	0.43	4,958	0.97	4,580	0.90	505,606	510,186	99.10
2012-13	496,460	96.45	6,168	1.20	2,355	0.46	5,612	1.09	4,151	0.81	510,595	514,746	99.19
2013-14	493,432	95.80	8,700	1.69	2,251	0.44	5,628	1.09	5,072	0.98	510,011	515,083	99.02
2014-15	492,611	95.62	8,501	1.65	2,096	0.41	5,941	1.15	6,019	1.17	509,149	515,168	98.83
2015-16	495,792	95.42	8,746	1.68	1,996	0.38	6,737	1.30	6,325	1.22	513,172	519,596	98.76
2016-17	497,812	95.49	7,951	1.53	1,891	0.36	7,465	1.43	6,218	1.19	515,119	521,337	98.81
2017-18	497,864	95.55	6,439	1.24	1,852	0.36	8,740	1.68	6,134	1.18	514,895	521,029	98.82

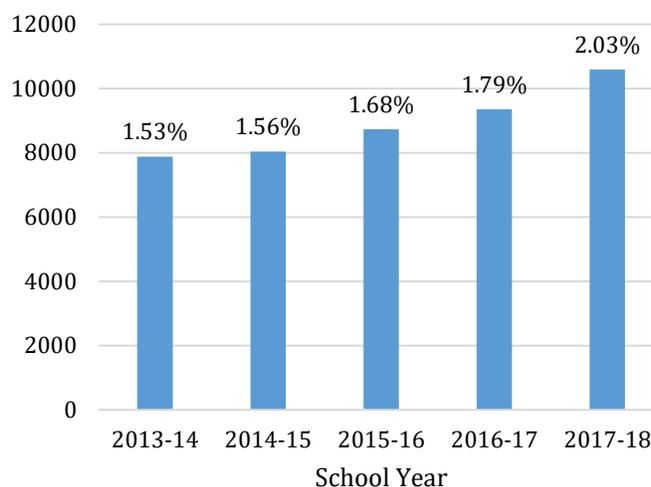
### Provisional Certificate of Immunization

- The percent of students with a Provisional Certificate of Immunization has declined since the 2013-14 school year.
- Provisional Certificates decreased from 1.69% (8,700 records) during the 2013-14 school year to 1.24% (6,439 records) during the 2017-18 school year (Table 3 and Figure 3). A Tdap secondary school vaccine requirement went into effect during the 2013-14 school year, which resulted in an increase in the number of Provisional Certificates.

### Exemptions

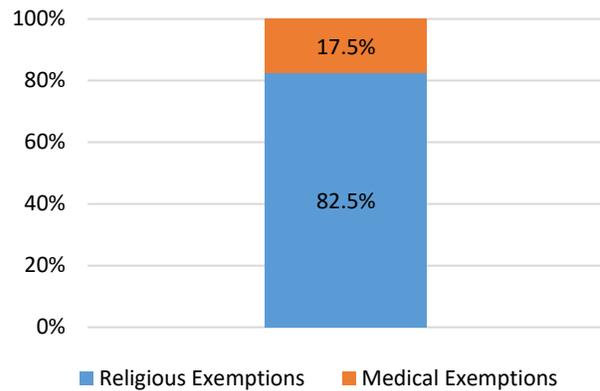
- Iowa allows two forms of vaccine exemptions: religious and medical. During the 2017-2018 school year, 2.04% (10,592 records) students in kindergarten through 12<sup>th</sup> grade were reported to have an exemption.
- This percentage of exemptions is part of a five-year trend of year-over-year increase in exemption rates (Figure 4).
- Of the 10,592 exemptions, 8,740 (82.5%) were categorized as religious and 1,852 (17.5%) as medical (Figure 5).

**Figure 4. Number and Percentage of Exemptions, Kindergarten to 12<sup>th</sup> Grade Iowa, 2013-14 to 2017-18**



- During the 2017-2018 school year, the percentage of religious immunization exemptions was 1.68% (8,740 records), which is higher when compared to five years ago (1.09%, 5,612 records in 2012-13).
- There was a 17.1% (1,275 records) increase in the number of religious immunization exemptions from the previous school year.
- The percentage of medical immunization exemptions was 0.36% (1,852 records), and remained unchanged since the previous year.
- The percent of students in kindergarten through 12<sup>th</sup> grade with Medical Immunization Exemptions increased from 2000-01 to 2012-13, but has since been on the decline (Table 3).

**Figure 5. Percentage of Exemptions by Type, Kindergarten - 12<sup>th</sup> Grade, Iowa, 2017-2018**



### Under and Un-Immunized

- The number of under and un-immunized students has remained consistent since 2013-14 despite increases in the number of Certificates of Religious Exemption (Appendix 4).
- The number of Provisional Certificates decreased 26% (2,261 records) since the 2013-14 school year, and by 19% (1,512 records) from the previous year.
- The number of Certificates of Medical Exemption decreased by 17% (399 records) since the 2013-14 school year, and by 2% (39 records) from the previous school year.
- The number of Certificates of Religious Exemption has increased 55% (3,112 records) since 2013-14 and increased 17% (1,275 records) from the previous year (Table 4).

**Table 4. Under-Immunized Students Kindergarten - 12<sup>th</sup> Grade, Iowa, 2013-14 to 2017-18**

	2013-14	2014-15	2015-16	2016-17	2017-18
Certificate of Medical Exemption	2,251	2,096	1,996	1,891	1,852
Certificate of Religious Exemption	5,628	5,941	6,737	7,465	8,740
Provisional Certificate	8,700	8,501	8,746	7,951	6,439
Invalid or No Certificate	5,072	6,019	6,325	6,218	6,134
Total Under-Immunized	21,651	22,557	23,804	23,525	23,165
Percent of Under-Immunized Students	4.2%	4.4%	4.6%	4.5%	4.5%
Percent Change in Number of Under-immunized from previous year		4.2%	5.5%	-1.2%	-1.5%

**Table 5. State Immunization Summary by Grade, Kindergarten-12<sup>th</sup> Grade, Iowa, 2017-18**

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
HS	2060	70.64	124	4.25	45	1.54	526	18.04	161	5.52	2916	2755	94.48
K	36917	93.15	1356	3.42	93	0.23	694	1.75	572	1.44	39632	39060	98.56
First	36726	95.90	437	1.14	97	0.25	716	1.87	320	0.84	38296	37976	99.16
Second	38119	96.01	329	0.83	96	0.24	765	1.93	393	0.99	39702	39309	99.01
Third	38874	96.56	282	0.70	135	0.34	699	1.74	269	0.67	40259	39990	99.33
Fourth	40018	96.69	270	0.65	152	0.37	651	1.57	297	0.72	41388	41091	99.28
Fifth	40240	97.03	218	0.53	157	0.38	605	1.46	251	0.61	41471	41220	99.39
Sixth	39379	96.72	238	0.58	169	0.42	595	1.46	333	0.82	40714	40381	99.18
Seventh	37760	94.30	502	1.25	166	0.41	820	2.05	796	1.99	40044	39248	98.01
Eighth	37674	95.24	439	1.11	180	0.46	709	1.79	554	1.40	39556	39002	98.60
Ninth	38650	96.27	484	1.21	141	0.35	510	1.27	364	0.91	40149	39785	99.09
Tenth	38052	96.57	377	0.96	124	0.31	509	1.29	342	0.87	39404	39062	99.13
Eleventh	37329	96.61	370	0.96	141	0.36	456	1.18	342	0.89	38638	38296	99.11
Twelfth	36066	92.81	1013	2.61	156	0.40	485	1.25	1140	2.93	38,860	37720	97.07
State K-12	497864	95.55	6439	1.24	1852	0.36	8740	1.68	6134	1.18	521029	514895	98.82

Table Note: HS indicates Home School and K indicates Kindergarten

## Vaccination Coverage for Kindergarten Students

- During the 2017-18 school year, 98.56% of Iowa kindergarten students had valid immunization certificates and were compliant with immunization requirements.
- The statewide coverage levels for all vaccinations required at school entry was 93.15%, as indicated by valid Certificates of Immunizations (Appendix 5).
- Invalid or no immunization certificates accounted for 1.44% of enrolled kindergarten students (Figure 6 and Table 6).

**Figure 6. Immunization certificates by type, Kindergarten, Iowa, 2011-12 to 2017-18**

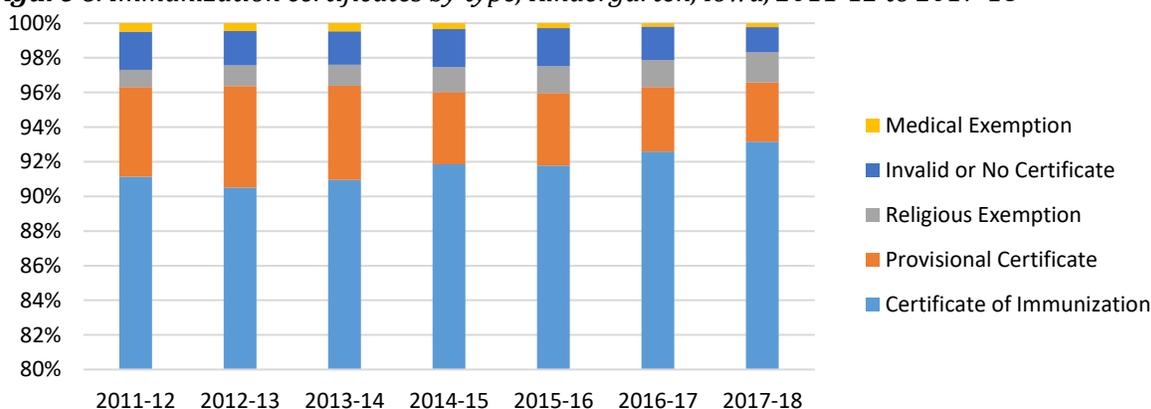


Figure Note: Vertical axis begins at 80%

**Table 6. State Immunization Summary by Year, Kindergarten, Iowa, 2011-12 to 2017-18**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%
2011-12	36,500	91.13	2,076	5.18	193	0.48	398	0.99	886	2.21	40,053	39,167	97.79
2012-13	37,713	90.52	2,438	5.85	188	0.45	499	1.20	825	1.98	41,663	40,838	98.02
2013-14	37,587	90.95	2,246	5.43	193	0.47	498	1.21	801	1.94	41,325	40,524	98.06
2014-15	38,261	91.85	1,737	4.17	138	0.33	597	1.43	923	2.22	41,656	40,733	97.78
2015-16	37,824	91.77	1,730	4.20	119	0.29	635	1.54	907	2.20	41,215	40,308	97.80
2016-17	36,649	92.58	1,478	3.73	79	0.20	622	1.57	759	1.92	39,587	38,828	98.08
2017-18	36,917	93.15	1,356	3.42	93	0.23	694	1.75	572	1.44	39,632	39,060	98.56

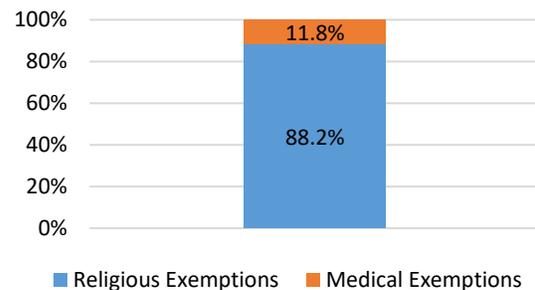
### Provisional Certificate of Immunization

- Provisional certificates have decreased by 21.6% (374 records) since 2015-16.
- During the 2017-18 school year, kindergartners had the highest rate of provisional exemptions (3.42%/1,356 students), which accounts for 21% of all Provisional Certificates issued in kindergarten through 12<sup>th</sup> grade.

### Exemptions

- During the 2017-2018 school year, 787 (1.99%) kindergartners were reported to have an exemption.
- The percentage of religious exemptions was 1.75%, which is significantly higher when compared to seven years ago.
- The percentage of medical exemptions was 0.23%, which is a slight increase from the previous year (Table 6).
- Of the 787 exemptions, 694 (88.2%) were categorized as religious and 93 (11.8%) as medical (Figure 7).

**Figure 7. Percentage of Exemptions by Type, Kindergarten, Iowa, 2017-2018**



### Kindergarten Vaccination Coverage by School Type

- During the 2017-18 school year, kindergartners enrolled in public schools had a higher percentage of immunization certificates and lower percentages of invalid/no certificates, provisional certificates, and exemptions compared to their peers enrolled in private schools.
- The statewide coverage levels for all vaccinations required at school entry in private and public schools was 95.59% and 98.83%, respectively, as indicated by valid Certificates of Immunizations.
- During the 2017-2018 school year, 3.82% of kindergarten students enrolled in private schools reported an exemption, compared to 1.82% enrolled in public schools (Table 7).

**Table 7. Kindergarten Vaccine Coverage and Exemptions by School Type, Iowa, 2017-18**

School Type	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Total	%	Total	%	Total	%	Total	Total	%
Private	2,972	87.90	131	3.87	11	0.33	118	3.49	149	4.41	3,381	3,232	95.59
Public	33,945	93.64	1,225	3.38	82	0.23	576	1.59	423	1.17	36,251	35,828	98.83
Total	36,917	93.15	1,356	3.42	93	0.23	694	1.75	572	1.44	39,632	39,060	98.56

## Under and Un-Immunized

- During the 2017-18 school year, 6.9% (2,715 records) of kindergarten students were under or un-immunized (Appendix 6).
- The number of under/un-immunized students has steadily decreased since 2013-14 due to decreases in the number of Certificates of Medical Exemption, Provisional Certificates, and Invalid/No Certificates.
- For the 2017-18 school year, the number of Provisional Certificates decreased 39.6% (890 records) since the 2013-14 school year and decreased by 8.3% (122 records) from the previous year.
- The number of Certificates of Medical Exemption decreased by 51.8% (100 records) since the 2013-14 school year, but increased 17.7% (14 records) from the previous year.
- The number of Certificates of Religious Exemption has increased 39.4% (196 records) since 2013-14 and increased 11.6% (72 records) from the previous year (Table 8).

**Table 8. Under-Immunized Students Kindergarten, Iowa, 2013-14 to 2017-18 School Years**

	2013-14	2014-15	2015-16	2016-17	2017-18
Certificate of Medical Exemption	193	138	119	79	93
Certificate of Religious Exemption	498	597	635	622	694
Provisional Certificate	2,246	1,737	1,730	1,478	1,356
Invalid or No Certificate	801	923	907	759	572
Total Under-Immunized	3,738	3,395	3,391	2,938	2,715
Percent of Under-Immunized Students	9.1%	8.2%	8.2%	7.4%	6.9%
Percent Change in Number of Under-Immunized from previous year		-9.2%	-0.1%	-13.4%	-7.6%

## Vaccination Coverage for Seventh Grade Students

Iowa currently has two additional immunization requirements for all students entering, advancing or transferring into seventh grade which may impact vaccination coverage:

- Beginning with the 2013-2014 school year, all students entering, advancing or transferring into seventh grade required proof of an adolescent tetanus, diphtheria, and pertussis (whooping cough) booster immunization (Tdap) for school enrollment. This dose must contain the pertussis component to be considered compliant with school entry requirements.
- Beginning with the 2017-2018 school year, all students entering, advancing or transferring into seventh grade and born after September 15, 2004, require proof of one dose of meningococcal conjugate vaccine (MenACWY).
- During the 2017-18 school year, 98.01% of Iowa seventh grade students had valid immunization certificates and were compliant with immunization requirements.

- The statewide coverage levels for all vaccinations required at upon entry into seventh grade was 94.30%, as indicated by valid Certificates of Immunizations (Appendix 7).
- Invalid or no immunization certificates accounted for 1.99% of enrolled seventh grade students (Figure 8 and Table 9).

**Figure 8. Immunization certificates by type Seventh Grade, Iowa, 2015-16 to 2017-18**

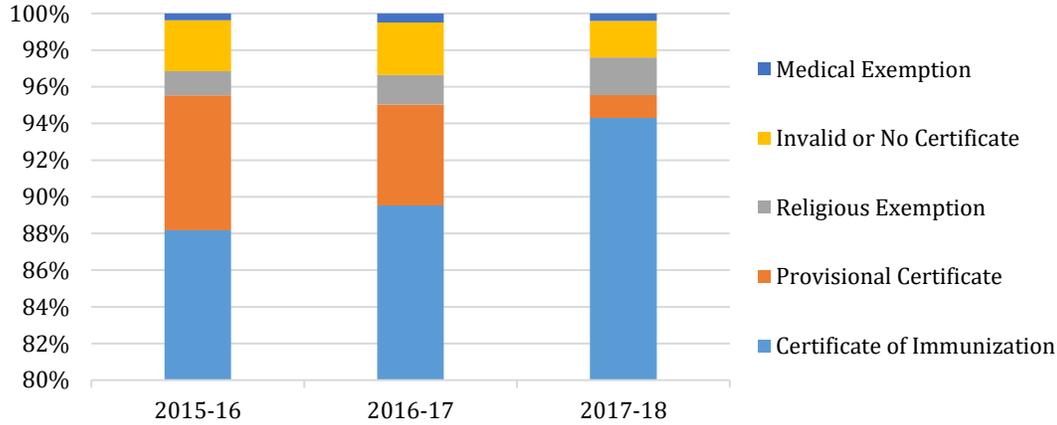


Figure Note: Vertical axis begins at 80%

**Table 9. State Immunization Summary, Seventh Grade, Iowa, 2015-16 to 2017-18**

Year	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%		Total	%
2015-16	3,4251	88.18	2,857	7.36	145	0.37	511	1.32	1,079	2.78	38,843	37,764	97.22
2016-17	35,320	89.53	2,168	5.5	192	0.49	638	1.62	1,133	2.87	39,451	38,318	97.13
2017-18	37,760	94.30	502	1.25	166	0.41	820	2.05	796	1.99	40,044	39,248	98.01

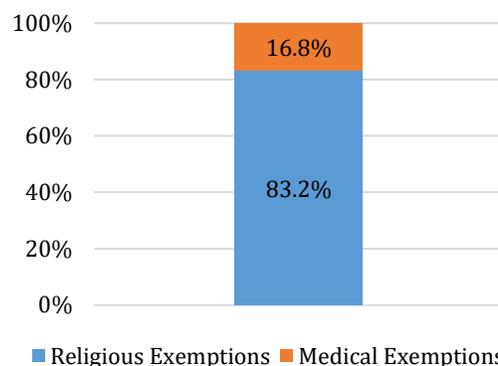
### Provisional Certificate of Immunization

- The number of Provisional Certificates decreased from 7.36% (2,857 records) during the 2015-16 school year to 1.25% (502 records) during the 2017-18 school year.
- For the 2017-18 school year, the number of Provisional Certificates decreased by 82.4% since the 2015-16 school year and decreased by 24.1% from the previous year (Figure 8 and Table 9).

## Exemptions

- During the 2017-2018 school year, 986 (2.46%) seventh graders were reported to have an exemption.
- The percentage of religious exemptions was 2.05% (820 records), which is higher when compared to two years ago.
- The percentage of medical exemptions was 0.41% (166 records), which is a slight decrease from the previous year (Table 9).
- Of the 986 exemptions, 820 (83.2%) were categorized as religious and 166 (16.8%) as medical (Figure 9).

**Figure 9.** Percentage of Exemptions by Type, Seventh Grade, Iowa, 2017-2018



## Under and Un-Immunized

- During the 2017-18 school year, 5.7% of seventh grade students were under or un-immunized (2,284 records), which is a decrease of 1,847 records from the previous school year (Appendix 8).
- The number of under/un-immunized students has decreased since 2015-16 due to decreases in the number of Provisional Certificates, and Invalid/No Certificates, but the number of Certificates of Medical Exemption has increased.
- The number of Certificates of Medical Exemption increased by 14.5% (21 records) since the 2015-16 school year, but decreased 13.5% (26 records) from the previous year.
- The number of Certificates of Religious Exemption has increased 60.5% (309 records) since 2015-16 and increased 28.5% (182 records) from the previous year (Table 10).

**Table 10.** Under-Immunized Students, Iowa, Seventh Grade, 2015-16 to 2017-18 School Years

	2015-16	2016-17	2017-18
Certificate of Medical Exemption	145	192	166
Certificate of Religious Exemption	511	638	820
Provisional Certificate	2,857	2,168	502
Invalid or No Certificate	1,079	1,133	796
Total Under-Immunized	4,592	4,131	2,284
Percent of Under-Immunized Students	11.8%	10.5%	5.7%
Percent Change in Number of Under-Immunized from previous year		-10%	-44.7%

## Vaccination Coverage for 12<sup>th</sup> Grade Students

Iowa has one additional vaccine requirement for students enrolling in 12<sup>th</sup> grade. Beginning with the 2017-2018 school year, all students entering, advancing, or transferring into 12<sup>th</sup> grade and born after September 15, 1999, need proof of two doses of meningococcal (A, C W, Y) vaccine (one dose received on or after 16 years of age); or one dose if received when the student was 16 years of age or older. This new requirement may have affected vaccination coverage for this age group during the 2017-18 school year.

- During the 2017-18 school year, 97.07% of Iowa 12th grade students had valid immunization certificates and were compliant with immunization requirements.
- The statewide coverage levels for all vaccinations required at school entry was 92.81%, as indicated by valid Certificates of Immunizations (Appendix 9).
- Invalid or no immunization certificates accounted for 2.93% of enrolled 12<sup>th</sup> grade students (Figure 10 and Table 11).

**Figure 10.** Immunization certificates by type, 12<sup>th</sup> Grade, Iowa, 2017-18

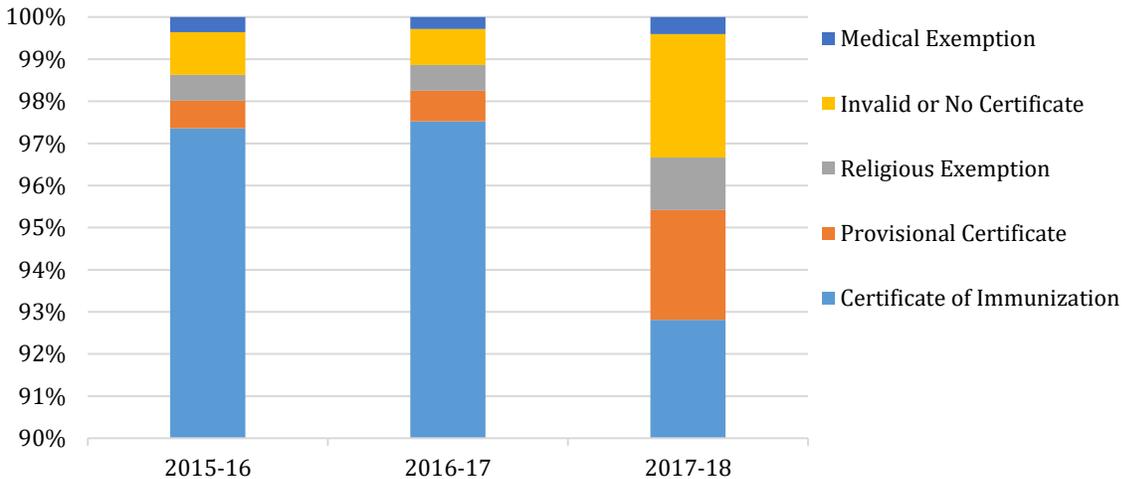


Figure Note: Vertical axis begins at 90%

**Table 11.** State Immunization Summary, 12<sup>th</sup> Grade, Iowa, 2015-2016 to 2017-18

Grade	Immunization Certificates		Provisional Certificates		Exemptions				Invalid / No Certificates		Total Enrolled	Total Valid Certificates	
	Total	%	Total	%	Medical		Religious		Total	%	Total	Total	%
2015-16	37037	97.36	250	0.66	136	0.36	231	0.61	387	1.02	38041	37654	98.98
2016-17	37814	97.52	282	0.73	110	0.28	239	0.62	330	0.85	38775	38445	99.15
2017-18	36066	92.81	1013	2.61	156	0.40	485	1.25	1140	2.93	38860	37720	97.07

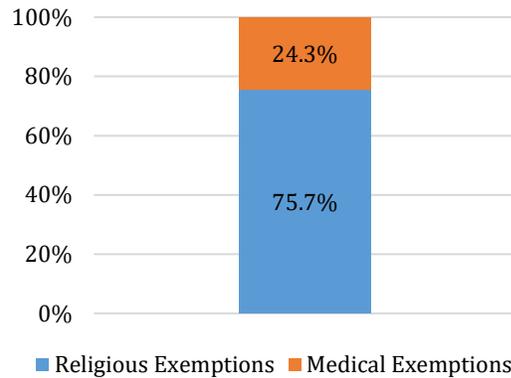
### Provisional Certificate of Immunization

- The number of Provisional Certificates increased from 0.66% (250 records) during the 2015-16 school year to 2.61% (1,013 records) during the 2017-18 school year.
- The number of Provisional Certificates had the greatest increase in certificate type from the previous year (Figure 10 and Table 11).

## Exemptions

- During the 2017-2018 school year, 641 (1.65%) 12<sup>th</sup> graders were reported to have an exemption.
- The percentage of religious exemptions was 1.25% and the percentage of medical exemptions was 0.40%.
- Of the 641 exemptions, 485 (75.7%) were categorized as religious and 156 (24.3%) as medical (Figure 11).

**Figure 11. Percentage of Exemptions by Type, 12<sup>th</sup> Grade, Iowa, 2017-2018**



## Under and Un-Immunized

- The number of under/un-immunized students has increased since 2015-16 due to increase in the number of Provisional Certificates, Invalid/No Certificates, Certificates of Medical Exemption, and Certificate of Religious Exemptions (Table 12).
- During the 2017-18 school year, 7.2% (2,794 records) of 12<sup>th</sup> grade students were under or un-immunized (Appendix 10).
- During the 2017-18 school year, there was a 190.7% increase in under and un-immunized students from the previous year (1,833 records).
- The increase in under and un-immunized students is due to large increases in the number of students with Provisional Certificates and Invalid/No Certificates.
  - There was a 259.2% increase in the number of Provisional Certificates from the previous year, which was an increase in 731 records.
  - There was a 245.5% increase in the number of Invalid or No Certificates from the previous year, which was an increase in 810 records.
  - There was a 102.9% increase in the number of Certificates of Religious Exemption from the previous year, which was an increase in 246 records.
  - There was a 41.8% increase in the number of Certificates of Medical Exemption from the previous year, which was an increase in 46 records.

**Table 12. Under-Immunized Students, Iowa, 12th Grade, 2015-16 to 2017-18 School Years**

	2015-16	2016-17	2017-18
Certificate of Medical Exemption	136	110	156
Certificate of Religious Exemption	231	239	485
Provisional Certificate	250	282	1,013
Invalid or No Certificate	387	330	1,140
Total Under-Immunized	1,004	961	2,794
Percent of Under-Immunized Students	2.6%	2.5%	7.2%
Percent Change in Number of Under-Immunized from previous year		-4.3%	190.7%

## Summary

State vaccination requirements for child care and school entry are important tools for maintaining high vaccination coverage rates, and in turn, lower rates of vaccine-preventable diseases. While immunization rates in Iowa are consistent with or exceed national averages, pockets of under and un-immunized children leave themselves and their communities vulnerable to vaccine-preventable diseases. While the data in this report demonstrate trends, school audit data do not provide a full picture of all children's immunization history. Vaccination and exemption status reflects the child's status at the time of assessment. Some children may be in the process of receiving required vaccines and final vaccination or exemption status may change after completion of the audit (Provisional Certificates, Medical Exemptions and invalid records). In addition, some students with Religious Exemptions may have received some of the required vaccines.

All states allow for medical exemptions, five states do not allow religious exemptions, 18 allow philosophical exemptions, and three (California, Mississippi and West Virginia) do not allow exemptions for religious or philosophic reasons. Iowa law allows for medical and religious exemptions. Iowa exemption rates are consistent with national data, 2016-17 (Table 13).

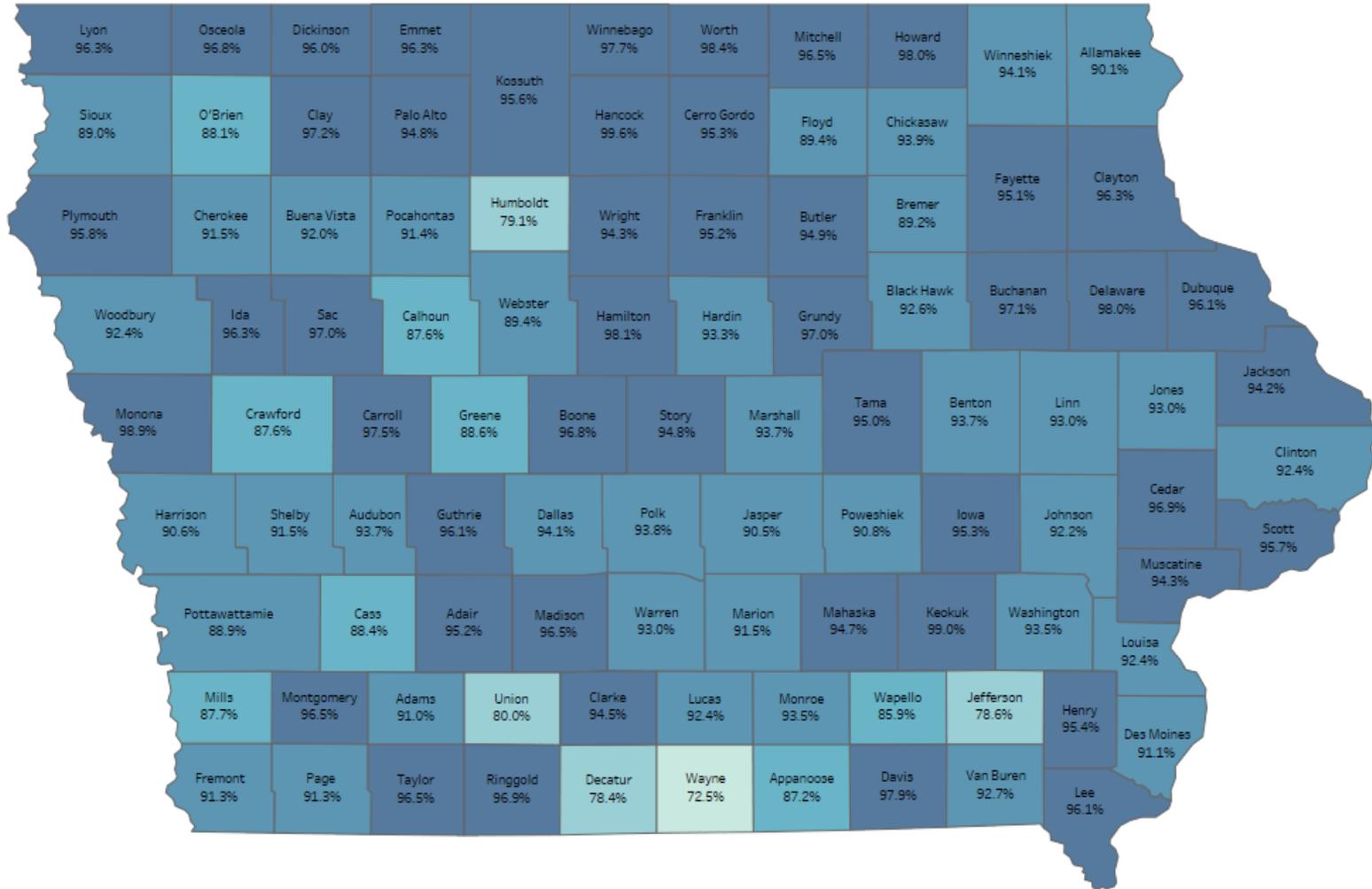
**Table 13. Vaccine Coverage and Exemptions, Iowa, 2017-18**

	Statewide- Child Care	Statewide - Kindergarten	Statewide - Kindergarten - 12 <sup>th</sup> grade	National 2016-2017 (Kindergarten only)
Percent Valid Certificates	96.17%	98.56%	98.82%	
Certificate of Immunization	93.25%	93.15%	95.55%	
Provisional Certificates	1.53%	3.42%	1.24%	
Certificate of Medical Exemption	0.10%	0.23%	0.36%	0.2% (Range 0.1 - 1.5%)
Certificate of Religious Exemption	1.28%	1.75%	1.68%	1.8% (Range 0.5 - 6.5%)
Invalid or No Certificate	3.83%	1.44%	1.18%	

Data Note: Source of national kindergarten data available at <https://www.cdc.gov/vaccines/imz-managers/coverage/schoolvaxview/pubs-resources.html>

Studies have found individuals claiming exemptions from immunization are at a greater risk of contracting vaccine-preventable diseases. States with lower immunization rates have higher rates of vaccine-preventable diseases. The IDPH Immunization Program continues to monitor immunization exemption rates, identify clusters of unimmunized children and provides education and information to address vaccine safety concerns. Vaccines prevent diseases and save lives. Immunize for a better life.

## **Appendix 1. Percent of Child Care Attendees with a Certificate of Immunization by County, Iowa, 2017-2018**

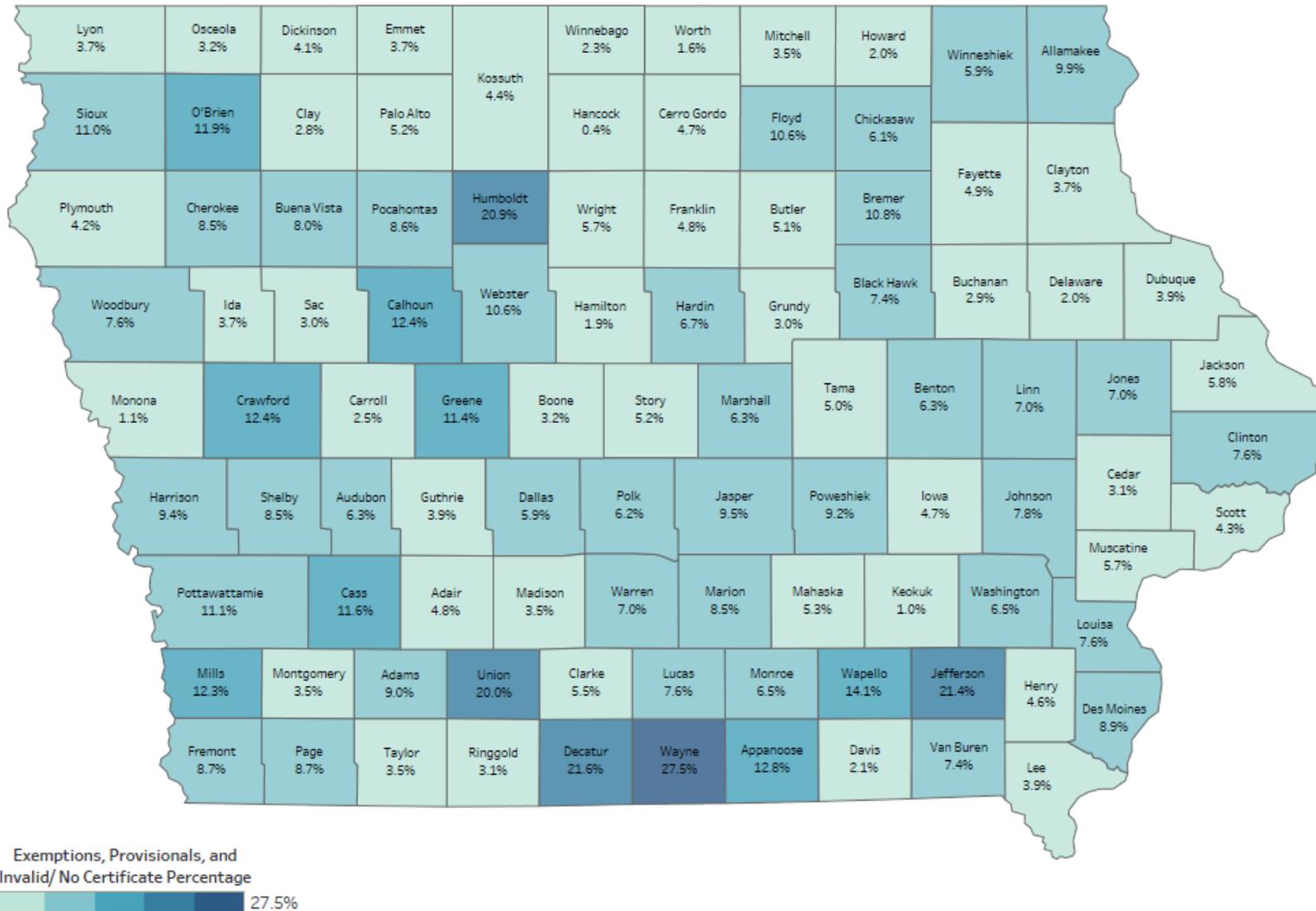


Certificate of Immunization Percentages  
72.5% 99.6%

Iowa Department of Public Health, Immunization Program

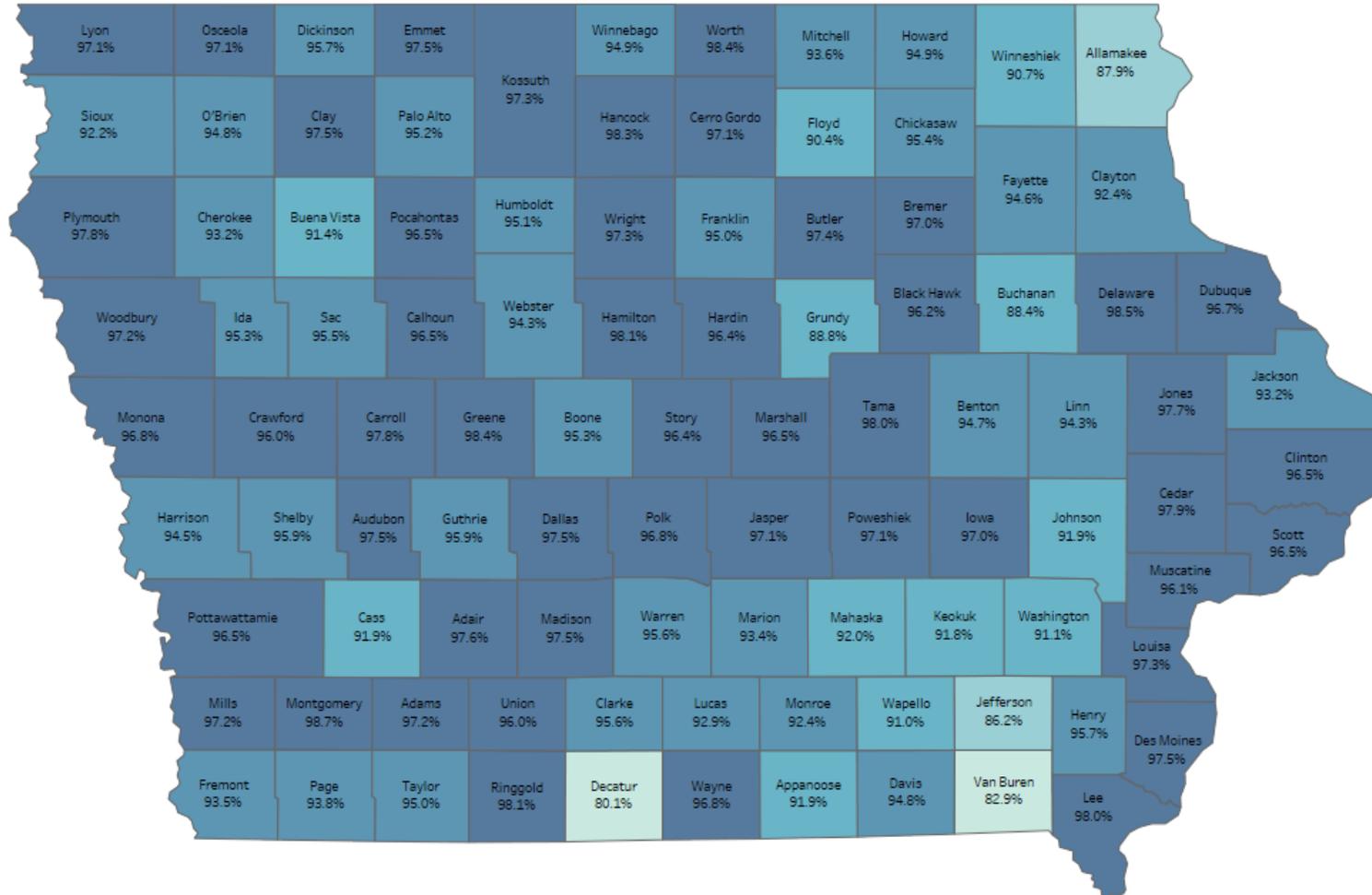
## **Appendix 2. Percent of Child Care Attendees who are Under or Un-immunized by County, Iowa, 2017-2018 School Year**

*Attendees with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



Iowa Department of Public Health, Immunization Program

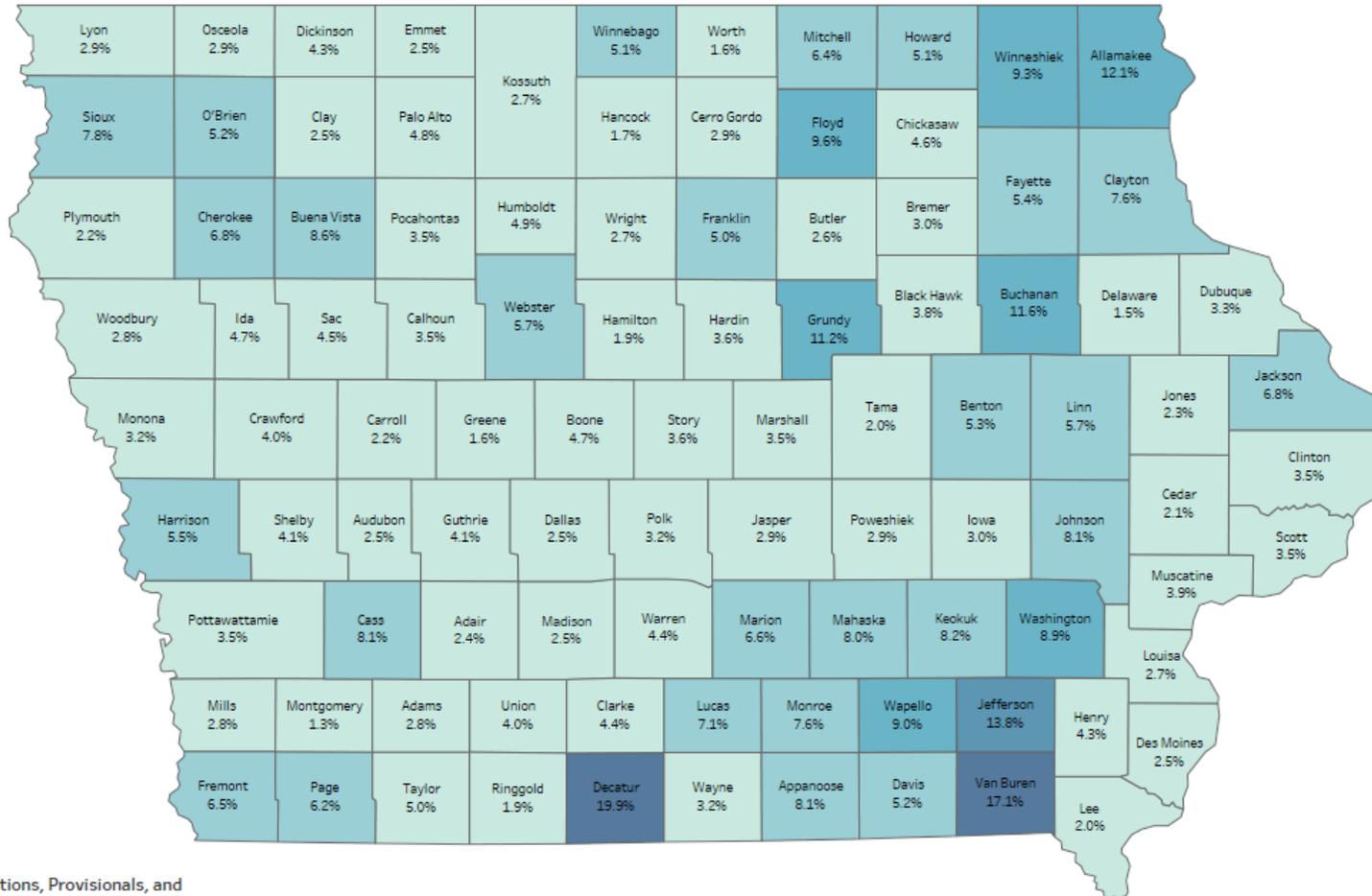
### *Appendix 3. Percent of Students Kindergarten through 12<sup>th</sup> Grade with a Certificate of Immunization by County, Iowa, 2017-2018*



Certificate of Immunization Percentages  
 80.0% 100.0%

Iowa Department of Public Health, Immunization Program

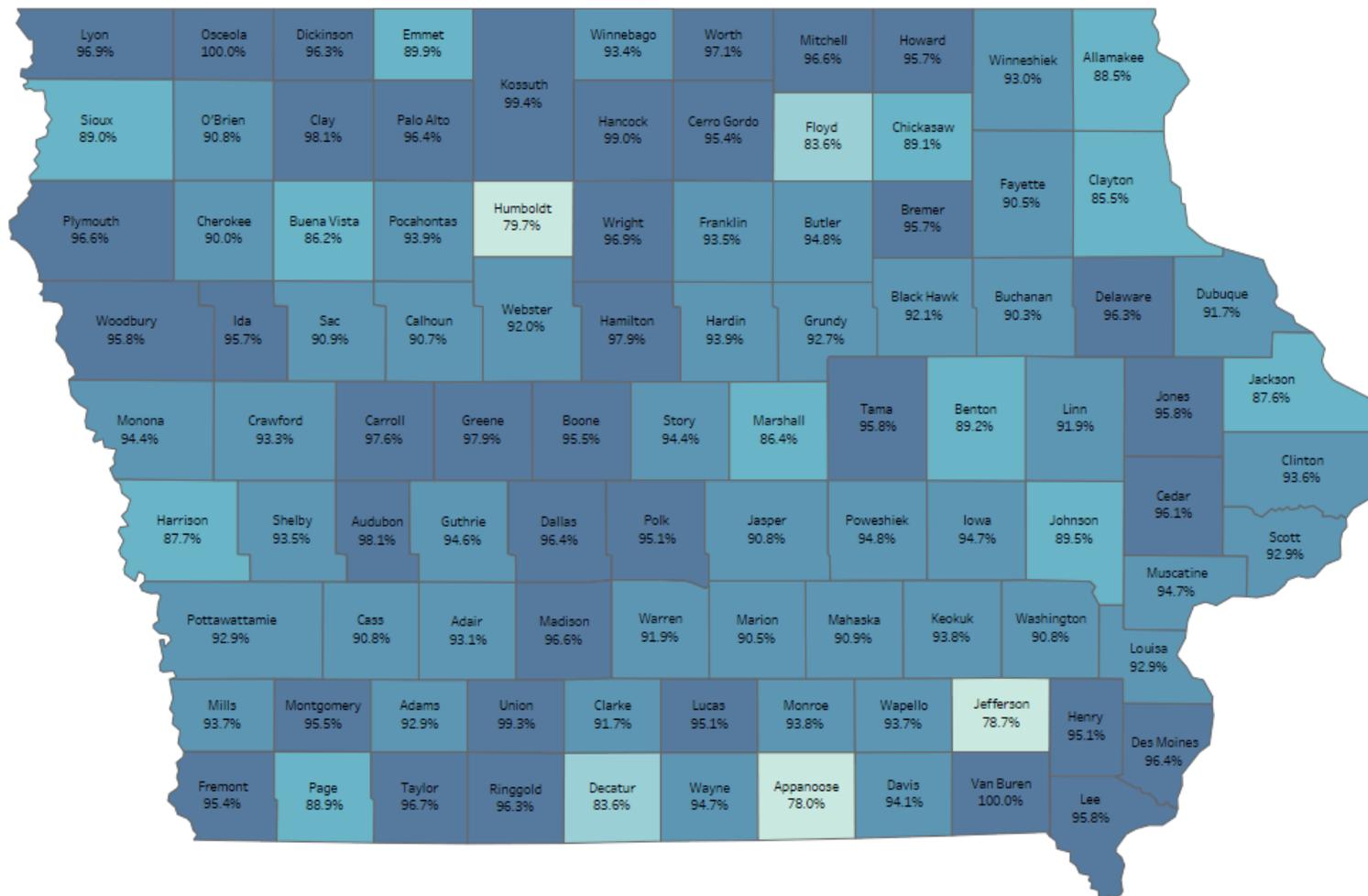
**Appendix 4. Percent of Students Kindergarten through 12<sup>th</sup> Grade who are Under or Un-immunized by County, Iowa, 2017-2018 School Year**  
*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



Exemptions, Provisionals, and Invalid/No Certificate Percentage  
 1.3% 19.9%

Iowa Department of Public Health, Immunization Program

## *Appendix 5. Percent of Kindergarten Students with a Certificate of Immunization by County, Iowa, 2017-2018*

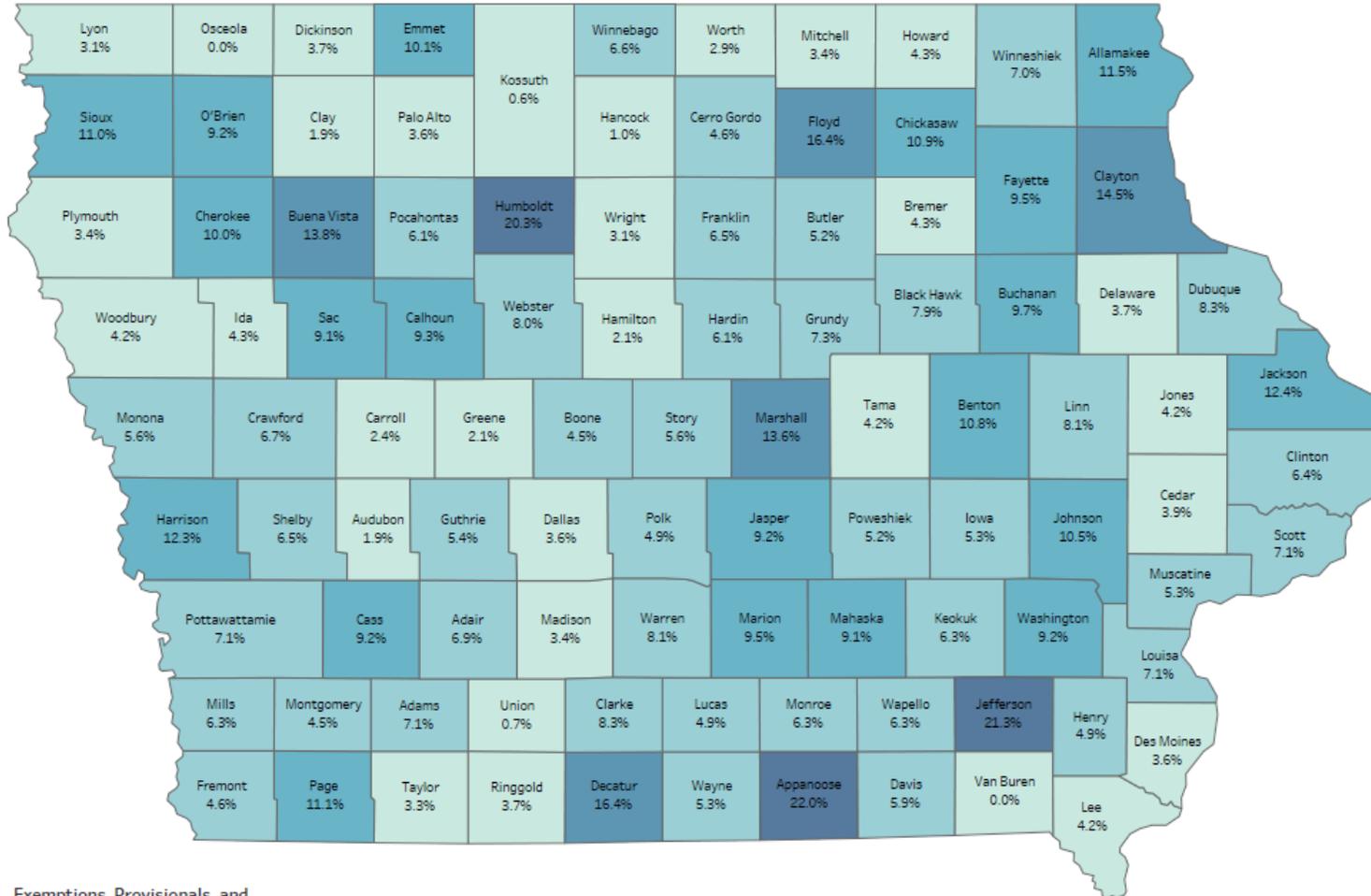


Certificate of Immunization Percentages  
75.0% 100.0%

Iowa Department of Public Health, Immunization Program

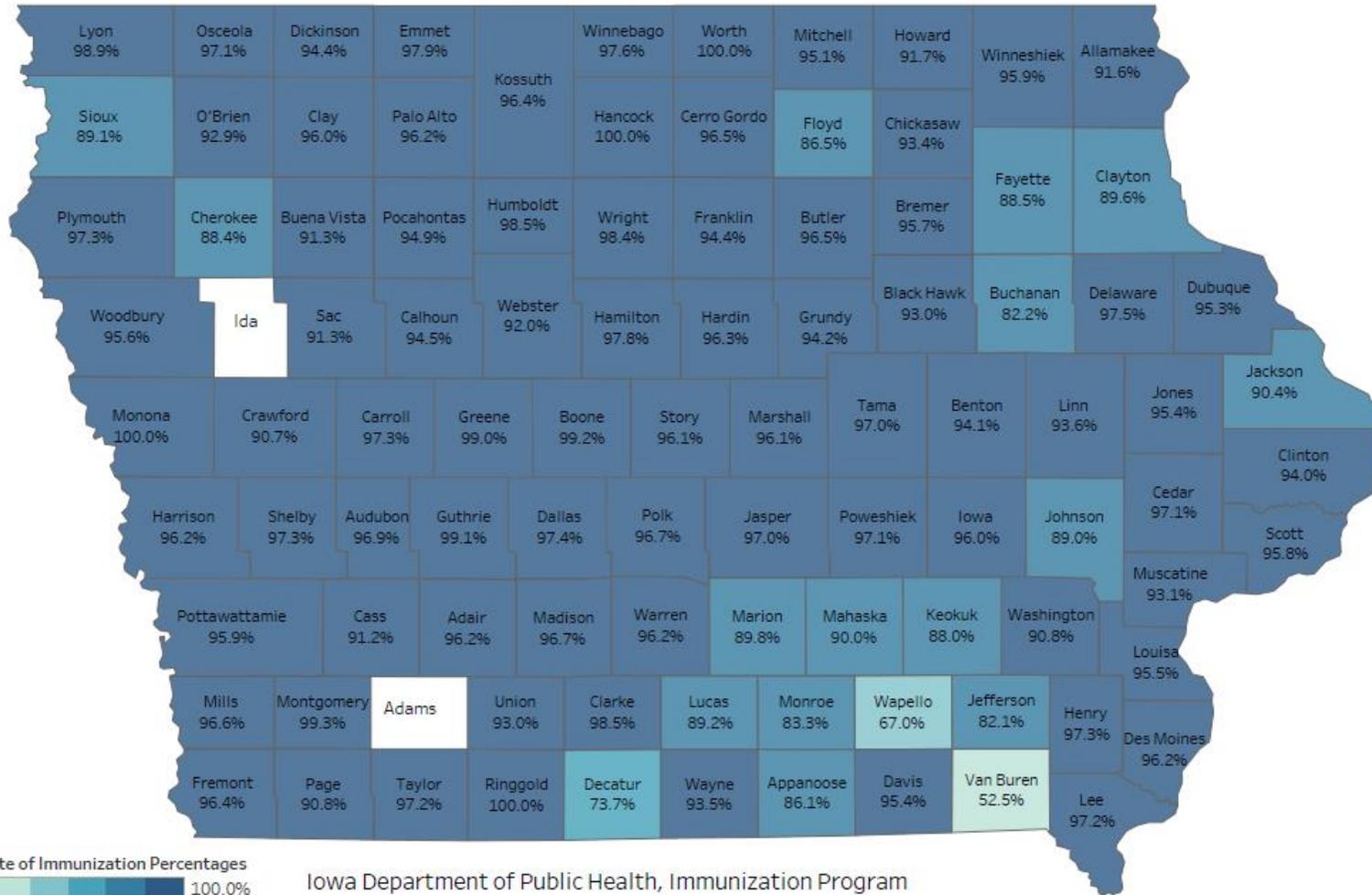
## *Appendix 6. Percent of Kindergarten Students who are Under or Un-immunized by County, Iowa, 2017-2018 School Year*

*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*



Iowa Department of Public Health, Immunization Program

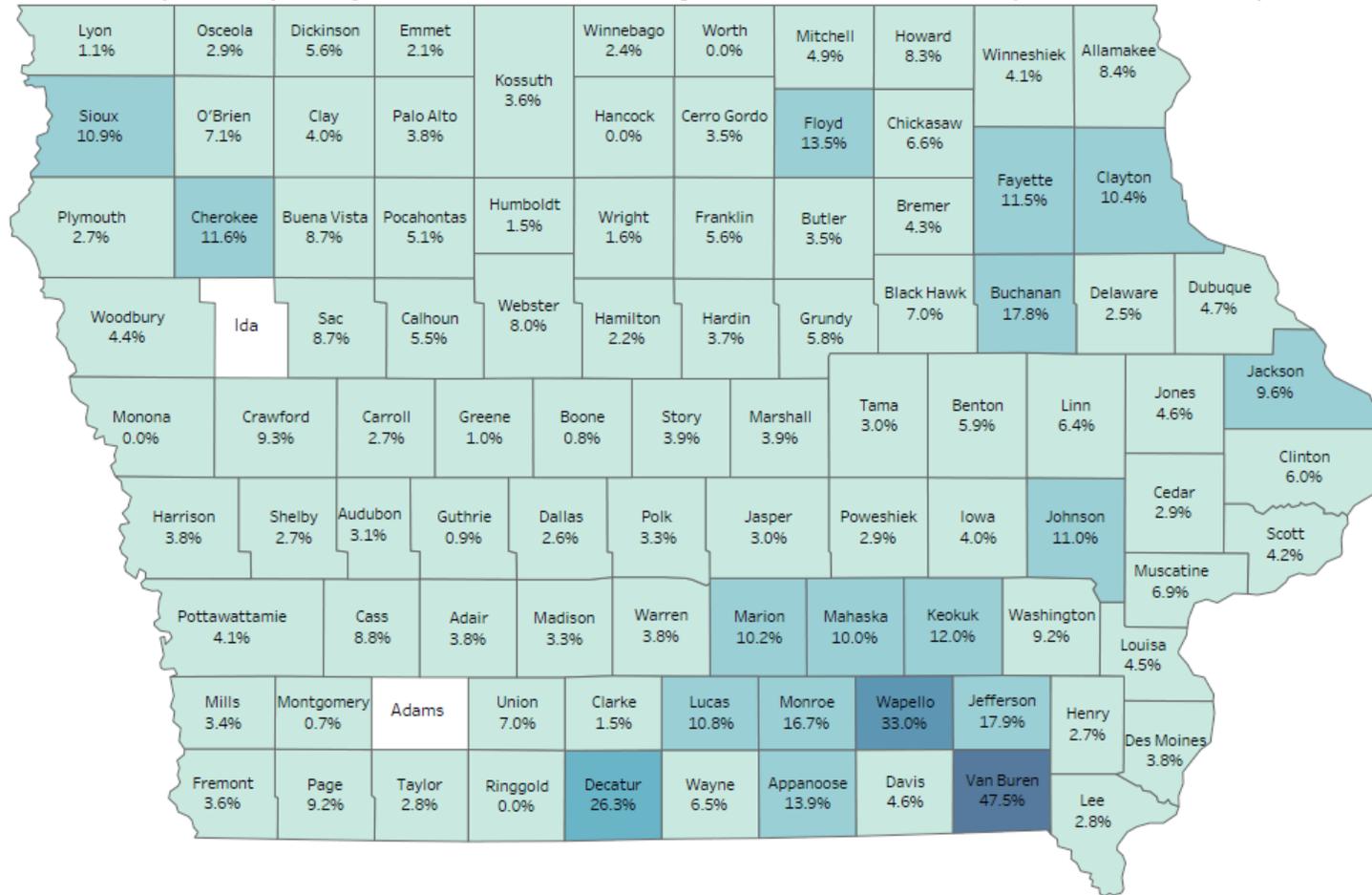
## *Appendix 7. Percent of Seventh Grade Students with a Certificate of Immunization by County, Iowa, 2017-2018*



*Map Note: Data are collected by location of school, not county of resident of student  
Ida and Adams counties do not include 7<sup>th</sup> grade students.*

## **Appendix 8. Percent of Seventh Grade Students who are Under or Un-immunized by County, Iowa, 2017-2018 School Year**

*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*

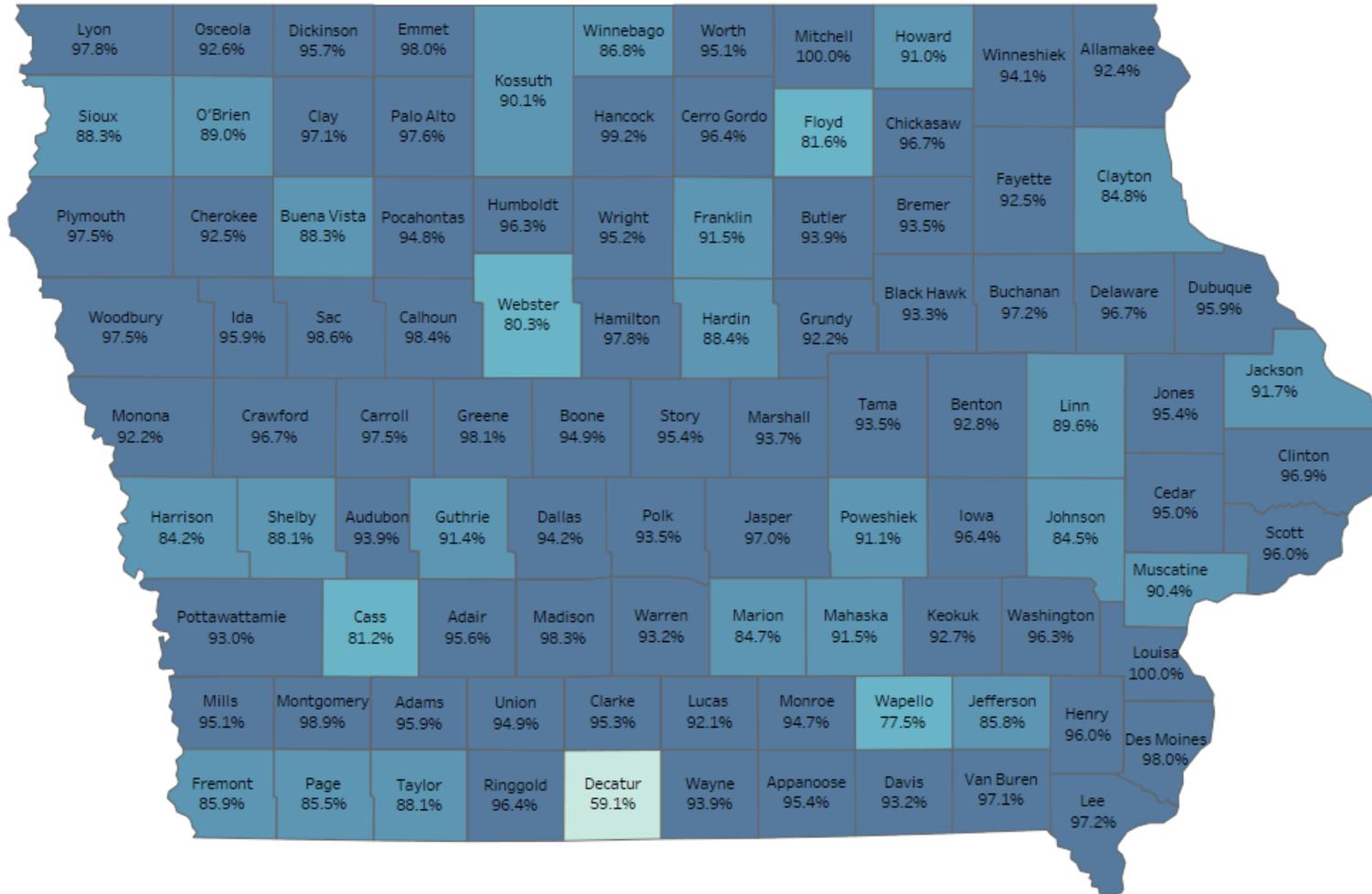


Exemptions, Provisionals, and Invalid/No Certificate Percentage  
0.0% 47.5%

Iowa Department of Public Health, Immunization Program

*Map Note: Data are collected by location of school, not county of resident of student  
Ida and Adams counties do not include 12<sup>th</sup> grade students.*

## *Appendix 9. Percent of 12<sup>th</sup> Grade Students with a Certificate of Immunization by County, Iowa, 2017-2018*



Certificate of Immunization Percentages  
59.1% 100.0%

Iowa Department of Public Health, Immunization Program

## *Appendix 10. Percent of 12<sup>th</sup> Grade Students who are Under or Un-immunized by County, Iowa, 2017-2018 School Year*

*Students with a Certificate of Religious or Medical Exemption, Provisional Certificate, or Invalid/No Certificate*

